

THE ATOM

February, 1966

Los Alamos Scientific Laboratory

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ON THE COVER: The same storms that stuccoed the tree atop Sandia Peak for Dudley Lynch's camera have provided Northern New Mexico with its best winter sports season in years. Bill Regan has a photo-story about a special group of Los Alamos winter enthusiasts; it starts on Page 16.

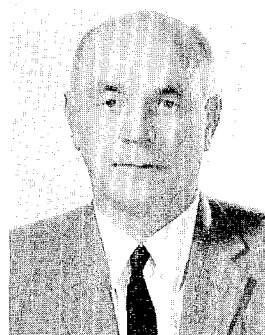
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Short Subjects

Four persons have been named to a panel that will negotiate a contract for architect-engineer services required for the proposed Los Alamos Meson Physics Facility. Members of the panel were appointed by Lawrence P. Gise, Manager of the Albuquerque Operations Office of the AEC. They are **Harold D. Anamosa** of the AEC's Contracts and Supply Division in Albuquerque, chairman; **Charles R. McNeely**, Director of the ALOO Finance Division; **Charles S. Huff** of the Engineering and Construction Division in Albuquerque, and **Mrs. Sally M. Gerety**, AEC legal counsel at the Los Alamos Area Office. Huff will be AEC project engineer. Advisors to the panel are **Robert F. Cooper** of the AEC Division of Construction in Washington, D. C.; **Frederick R. Tesche**, a group leader in the MP (Meson Physics) Division at LASL, and **L. Philip Reinig**, head of the LASL Engineering Department. The contract will be with Giffels and Rossetti, Inc., of Detroit, Mich., a firm that already has done some preliminary planning of the giant proton accelerator. Although construction funds have not been approved for the project, Congress has okayed the expenditure of \$1.2 million for the architect-engineering work and additional a-e money is requested in the fiscal 1967 budget.

Harold M. Agnew, W Division Leader, has been named Chairman of the Army Scientific Advisory Panel. He replaces Dr. Finn J. Larsen who has become Deputy Director of Defense Research and Engineering. In his new post, Agnew is also an ex-officio member of the Defense Science Board, an advisory group of 28 scientific and industrial leaders that counsels the Secretary of Defense on the needs and opportunities presented by new scientific knowledge relating to new weapons systems. The Army Scientific Advisory Panel, composed of eminent scientists, educators and industrial leaders, advises the Secretary of the Army and his staff on scientific and technological problems.

Adam F. Schuch, Alternate CMF-9 (Low Temperature Physics) Group Leader, is the new chairman of the Central New Mexico Section of the



American Chemical Society. Schuch, a LASL staffer for 16 years, was educated at Michigan State University and California Institute of Technology. Other 1966 officers of the Section include these Laboratory staff members: Alan Florin, CMF-2, chairman elect; Al Zerwekh, CMB-1, secretary, and Jere Knight, J-11, treasurer.

D-6 Group Leader Leslie Redman, **MP Division Leader Louis Rosen**, and **D-2 Group Leader Helen Redman** had important roles in the Mid-winter Meeting of the Executive Board and Advisory Council of the Special Libraries Association in Albuquerque January 19-21. Redman was the chairman of the meeting's topical panel discussion: "Technical Research in New Mexico: A Glimpse of Two Current Programs." Rosen addressed the group on "Harnessing the Atom" and also discussed the proposed LASL meson research facility. Mrs. Redman attended the meeting as chairman-elect of the SLA Advisory Council. More than 70 persons, representing SLA's 34 chapters in the United States and Canada, attended the conference.

Harold T. Moore, Zia Company Attorney since 1957, has resigned to enter private practice in Los Alamos. Company legal duties have been assumed by Jackson Sewell Couch, formerly with the IHFA legal staff.

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A Will Is the Way to Los Alamos For 5 Los Angeles Science Students

By **ED WALTERSCHEID**

Los Angeles is a long way from Los Alamos—but not for John Essick's senior physics students at Los Angeles High School. For the past five years, five of them have annually come to visit LASL facilities during National Science Youth Days.

This year is no exception, and a quintet will again be on hand for the February 10 and 11 tours—thanks to the weird and wonderful will of Mrs. Alice G. Harrison.

Mrs. Harrison graduated from Los Angeles High School in 1895. When she died she remembered her alma mater with a bequest of \$913,000. She stipulated in her will that the money was to be placed in a trust fund and the interest "used to provide exceptional educational opportunities and experiences which would not otherwise be available to the students of LAHS through public funds, including, but not limited to, employing outstanding personalities or organizations for educational, scientific and cultural lectures and programs, and for educational travel experiences for qualified students, who have demonstrated by their conduct and achievements, that such travel experiences will be beneficial to the community as a whole."

The trip to Los Alamos is now a tradition at L.A. High, and students vie for it. This year's participants won the right through high scores on two tests dealing with

NRDS, Too

LASL will participate in Edison Day observance at the Nuclear Rocket Development Station in Nevada. Approximately 600 junior and senior science students from Clark County high schools have been invited to tour NRDS facilities on Saturday, February 12.

Families of all badged employees at NRDS also will be admitted to the facilities, which will be open from 9:30 a.m. to 3 p.m.

Areas that will be open for Science-Family Day will be the R-MAD (Reactor Maintenance, Assembly and Disassembly) Building, R-CP (Reactor Control Point), E-MAD (Engine Maintenance, Assembly and Disassembly) Building, NERVA (Nuclear Engine for Rocket Vehicle Application) Engine Test Stand, and the Administration and Engineering Building.

J. Division personnel will assist with tours of the R-MAD and R-CP buildings and will put on a cryogenics demonstration illustrating the use of super-cold materials.

Los Alamos scientific programs. All their expenses except for food and lodging will be paid by the Harrison Trust Foundation.

While at Los Alamos the students are expected to take careful notes on what they see and hear. On their return to Los Angeles, they must prepare a detailed report on their trip. This is then used as the basis for a series of lectures they give to students at the tenth grade and junior high levels. They also are expected to give lectures on Los Alamos during the school's open house and to PTA and other groups. If past years are representative, the students will give at least 10 talks concerning the things they saw and did at Los Alamos.

Essick, who was instrumental in starting the trips to Los Alamos, states that those who've made the trips have thoroughly enjoyed them and most have gone on to study some phase of nuclear science in college. They are now at MIT, Harvard, Stanford, UCLA, Cal Tech and Pomona. All are making fine records.

Students from 37 schools, in five states, are expected for this tenth observance of National Science Youth Days. There will be tours of Project Sherwood, Physics Building and Health Research Laboratory facilities.

Shorts . . .

continued from preceding page

Frederick Worman, biologist and archeologist with LASL's H-8 group, has been appointed official archeologist for the Nevada Test Site. The appointment was announced by James E. Reeves, manager of the Nevada Operations Office of the AEC. Worman, official LASL archeologist for nearly 15 years, has been informally directing archeological activities at NTS. His appointment

was one of a number of actions following a December tour of NTS by Worman and several other Nevada, National Park Service and AEC officials to study compliance of the AEC with the Act for Preservation of Antiquities.

MP Division Leader Louis Rosen will visit low-energy physics installations in the Soviet Union during February. He will be part of a delegation of U.S. scientists that will tour research facilities in Moscow, Leningrad, Kiev, Kharkov and Novosibirsk.



THE SAND REMEMBERS

Even as a computer stores information in the form of tracks on its memory cells, so does a sand dune remember footprints. News of many nocturnal events can be gleaned from a close study of these wordless records.

Dune tracks reveal not only the passing of all manner of creeping, crawling, hopping and walking creatures, but also the mindless swishing of grasses and reeds wind-guided in geometrical patterns; and the imperceptible movements of the sand itself under the pressure of the everlasting winds.

For it is the destiny of the dunes never to be the same from one hour to another, nor from one day to the following one, yet never really to have changed at all in ten thousand years. This perhaps is the essence of their enchantment—that pervading sense of timelessness which not even a bustling super-highway close at hand can dispel.

continued on next page

By JOHN YOUNG

Preceding page: Sand dunes in Death Valley National Monument are among that area's many natural attractions.

Below: Pure white gypsum dunes at White Sands National Monument set yucca seeds and shadows in contrast.

TV Western shows being what they are, it is no wonder that the average Easterner's misconception of the Southwestern scene seems to be that the entire region is composed of sunbaked sand dunes, with just enough room in between for Indian tepees, ghost towns, cavalry outposts and dry watercourses.

As those who live here know, the Southwest actually does have some remarkably high and handsome sand dunes, interspersed here and there among the forested mountain ranges, the lakes, the streams, the spaceports, the reclamation projects and automobile junkyards.

In fact, two famous and much-visited Southwestern national monuments are made up entirely of dunes—White Sands in New Mexico and Great Sand Dunes in southern Colorado. Several other parks and monuments include notable dunes such as those in Death Valley and Canyon de Chelly.

There are, of course, hundreds of other dunes in the Southwest not so famous but a constant delight to children, photographers, painters and nature lovers. They are par-

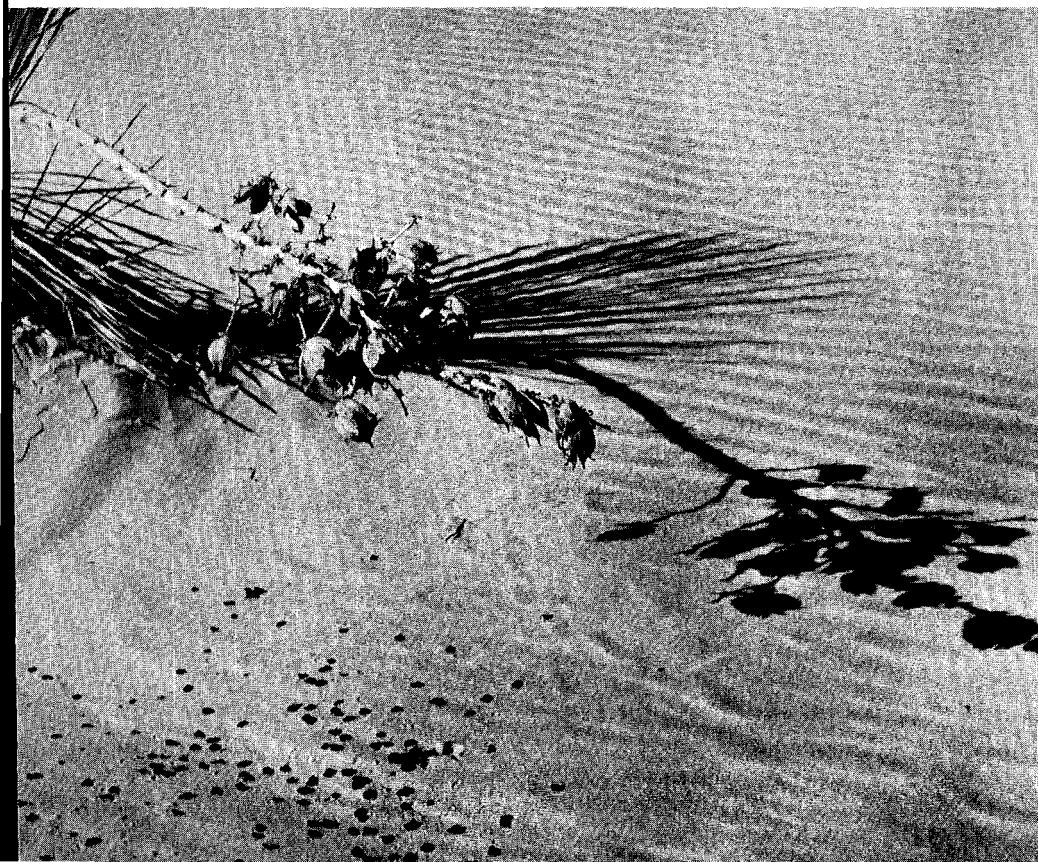
ticularly prevalent on the vast Navajo reservation, where they have lent their soft, glowing colors to rugs and paintings. There are dunes the length of the Rio Grande and the Chama; at Oasis State Park near Portales; on the north side of the Jemez range, and near Ojo Caliente. Dunes are not confined to desert regions except by popular definition.

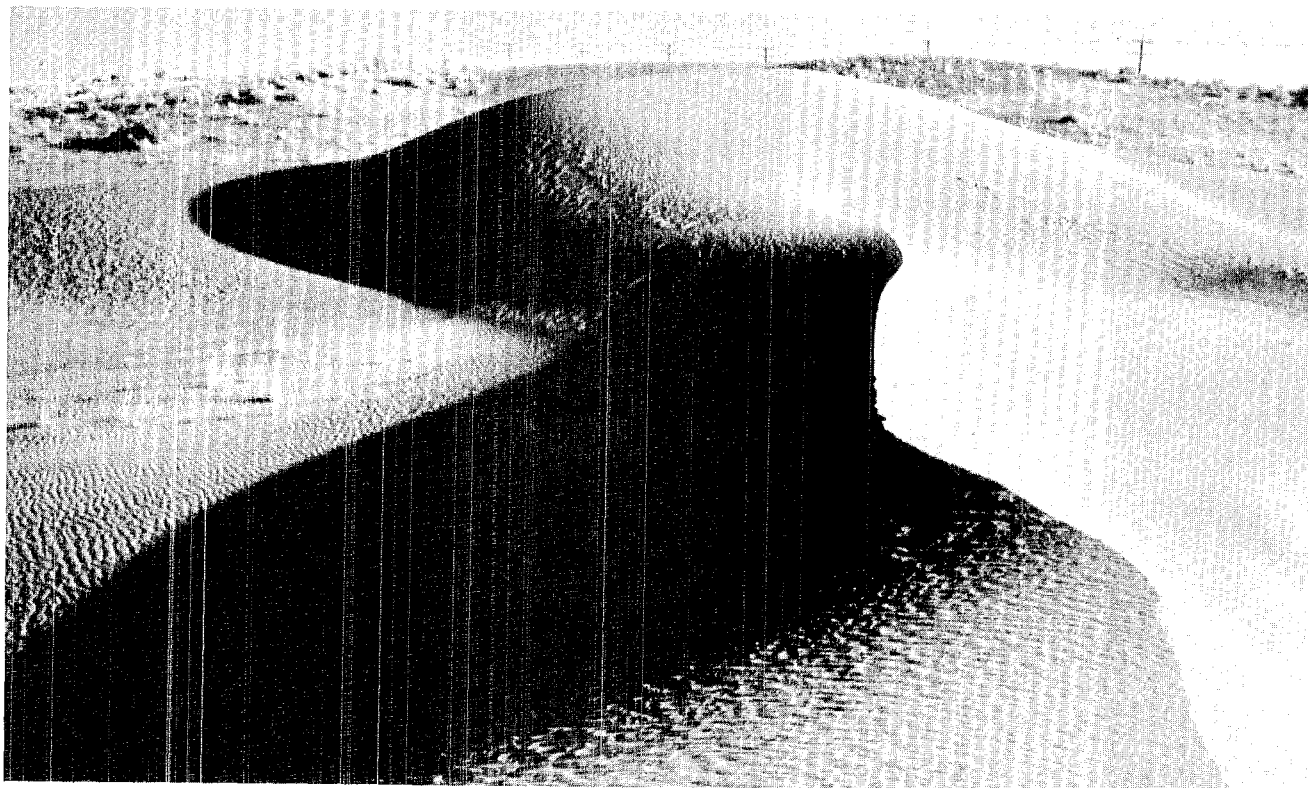
One large area of singularly beautiful dunes threatened for years to overwhelm U. S. Highway 85-60 north of Socorro, New Mexico, where the wide and usually dry Rio Salado furnishes the wind with a limitless supply of building material. But man has won the battle there, finally, with a raised, four-lane, limited access freeway designated as Interstate 25. The state has provided modern rest areas on both sides of the highway, with covered shelters, picnic tables and trash cans. The east side has a pedestrian gate to the dunes, which roll on down to the Rio Grande through La Jolla State Game Refuge. To the west, the sands stretch for miles. Amazingly, there are no billboards.

Not many travelers seem to realize it, or the prospect frightens them, but 50 yards off this highway an unspoiled wilderness beckons, no different than it was when Coronado struggled through it with his clumsy caravans four and a quarter centuries ago, doubtless cursing the sands in fluent Castilian.

Here, as in all big dunes removed from cities, an elfin world lies at the feet of the careful explorer, a microcosm inhabited by some of the world's tiniest of four-footed creatures. Myriads of tiny tracks run in all directions, converging in a hole under a bush or vanishing in mid-stride in a flurry of claw and wing marks that spell a desert tragedy in a universal language.

The variety of life thus revealed in the dunes is astounding. The smallest mammal whose tracks you are likely to see in the dunes is the desert shrew, which is probably also the world's smallest. It is no more than three inches long including its tail. It is so elusive it has been





seen by only a few professional naturalists. Only its tracks, tiny, dainty five-toed prints a quarter of an inch across, reveal its presence.

Then there are the larger shrews, and the moles and the voles (or meadow mice), the many kinds of mice and the rats, the chipmunks and the ground squirrels, the rabbits, the skunks, the ground-chucks and the gophers. Keeping Nature's ledger balanced are the predators: wildcats and house cats gone wild, ring-tailed cats, gray foxes and kit foxes, badgers, coyotes, hawks, owls and eagles.

All these wild creatures are to be found in the inland dunes at one time or another, although the casual visitor may never see any of them in person, only their tracks. Similarly, there are many insects for the small animals and the birds to live on, and lizards and toads and tortoises, but not many snakes. Having no means of cooling their blood, snakes die quickly in the open sun on hot, dry sand surfaces.

continued on next page

Above: Dunes along the Rio Salado north of Socorro are cut by Interstate Highway 25. Exploration is invited.

Right: Lizards leave distinctive trails on the sand as they scurry for cover.





Bark of a juniper tree in the Rio Salado dunes is scoured to polished bare wood by abrasion from the wind-driven sand.

Dunes . . .

continued from preceding page

Relatively few birds make their permanent home in the dunes, although many species visit there on foraging trips. Burrowing owls live in abandoned rabbit holes. Ravens and turkey vultures keep the premises tidied up. In season, desert sparrows compete with flocks of pippits and horned larks for the scanty seed crop. (For the pocket mouse as well as for the kangaroo rat, these same seeds are not only food but drink. These highly adapted desert dwellers have learned to manufacture water from dry seeds and stems, often going for months without other moisture.) In the southern dunes, Mexican doves huddle in hollows and saucy road runners hunt for snakes and lizards.

At the insect level, the dunes

have some fascinating dwellers. One is the ingenious trap-door spider, which builds a subterranean silo with a silk door hinged for privacy. Another is the ant-lion and its simple trap, a steep-sided pit like a dimple in the sand. The inch-long beetle lies hidden at the bottom, its curved pincers barely protruding. A passing ant happens into the pit and slides to the bottom. Chomp!

Other beetles build dikes of tiny pebbles or balls of mud around their holes. It is best not to go poking into such holes, or into piles of brush and sticks—scorpions and tarantulas also like dunes.

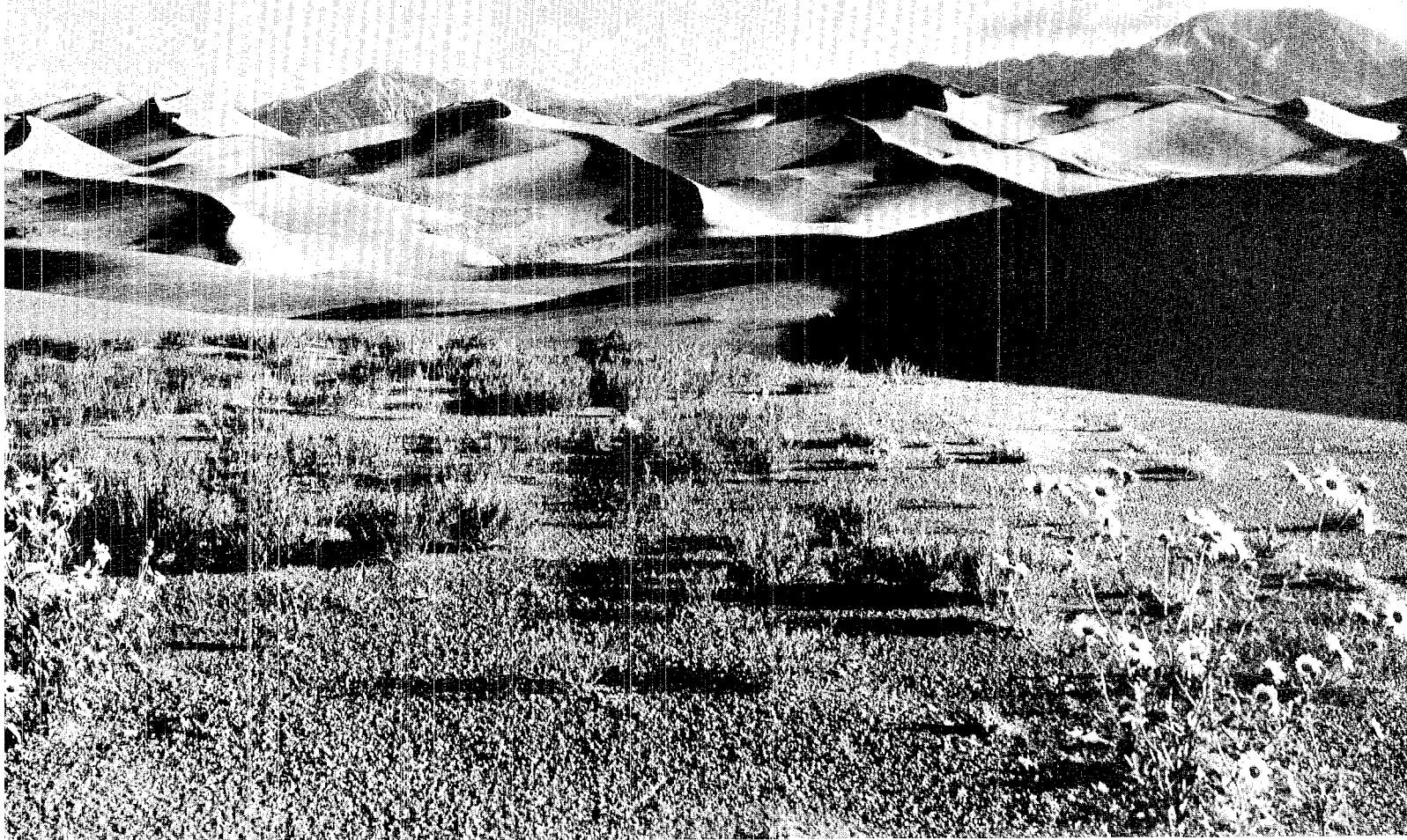
Besides the tracks of the animated creatures, the hardy grasses come to life in the slightest breeze and draw their own intricate designs. Wind-whipped tips of grass blades or exposed rootlets inscribe

perfect arcs, circles, and spirals. Cactus and reeds are sharply silhouetted; sand-etched and gnarled juniper trunks cast blue-black pools of shadow.

Plant life is necessarily sparse in the shifting dunes (which are sometimes permanently anchored by plants like lupine), but many hardy shrubs are found in them—sage, saltbush, creosote bush, mesquite, yucca, cholla, cactus and junipers—all capable of putting down roots 20 to 40 feet to water. Spring rains in favorable years bring a startling flush of brilliant bloom to the sands, when the ephemeral blossoms known as “belly flowers” (because you can only see them while lying on your stomach) flash to life overnight. Other species are more showy and can be found nearly any spring—the primroses, verbenas, perhaps some exquisite Mariposa tulips, California poppies, various yellow daisies of the Composite family. Plant species vary considerably with the locale of the dunes, but most of those mentioned here and many more besides are found throughout the Southwest.

Unlike the pure white gypsum hills of White Sands National Monument, nearly all inland dunes are made of ordinary silica sand mixed with pulverized quartz and other finely-ground rocks. When suitably located, as in a dry lake bed or stream-bed exposed to constant winds, the sand is lifted and carried to its destination, grain by grain. The escalation process is endless. The sand varies in grain size from fairly coarse particles easily visible to an impalpable powder that sifts through your fingers like water. The dunes themselves are ever on the move, heaped by the wind to curling crests that break over like waves, forming mounds against deep-rooted bushes or leaving them high and dry on weird pedestals.

The best time to see the dunes, and to photograph them, is in the first hour after sunup and the last hour or so before sunset, when the sun's rays are nearly horizontal and every shadowy detail on the sand



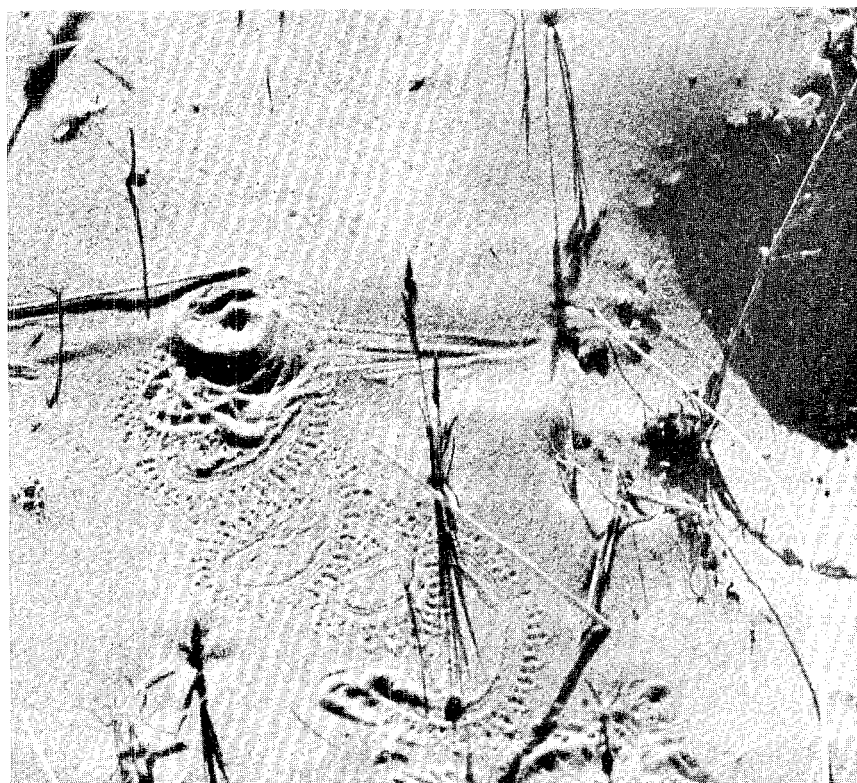
surface stands in relief. Especially in the early morning, before the day's winds have had a chance to erase the night's record, animal and insect tracks are most sharply defined.

At these magical times also, the curving, billowing and infinitely varied patterns of the dunes themselves are best viewed. The sun's last rays often give the dunes an incredible cast of color, ranging from warm tans to bright copper. It may well have been such color-scapes as these, seen from some distant hill in southern Arizona or New Mexico territory, that lured the early Spanish explorers into the illusion that they were seeing swaths of metallic gold.

(If you should become intrigued with the subject of animal tracks, a good reference book to have along is Murie's "A Field Guide to Mammal Tracks," found in most bookstores and the Mesa Library. It also illustrates tracks of birds, amphibians, reptiles, and even worms.)

Above: Some of the world's highest dunes are in Great Sand Dunes National Monument. (National Park Service Photo.)

Below: Tiny insect tracks, probably those of a centipede, vanish mysteriously, part of an unseen drama in the dunes.



New Boss, New Chores

ENG, Under Phil Reinig, Will Broaden Duties

By **PETER MYGATT**

LASL's Engineering Department has always been a flexible organization supporting the needs of the Laboratory. That flexibility is continuing under the leadership of L. Philip Reinig who took over the Department reins December 13, 1965 from John Bolton who has retired.

Reinig is currently structuring ENG to meet LASL's growing needs of the future by adding to and broadening the capabilities of his ENG groups.

ENG-1, headed by Emmett L. Brazier, is a project engineering group working directly in a liaison capacity with the AEC while providing engineering assistance for the two reactor facilities under construction. Planning functions formerly assigned to ENG-1 have been transferred to ENG-2, the design group under J. B. Weldon. Combining planning and design means

the group can do a more effective job, Reinig explains, since one complements the other.

AEC Communications at Los Alamos, headed by Richard Kennedy, will join LASL's Engineering Department as ENG-5 on July 1. This group will handle the technical area telephone system and Laboratory and security communications equipment, including radios and intercoms. In anticipation of the move, Kennedy is already sitting in on ENG's weekly staff meetings.

Functions of ENG-3, the records and land survey group, under S. E. Russo, will be broadened by further centralization of engineering services; a microfilm system for control and filing of engineering documents will be added and drafting services will be increased to support maintenance and minor construction.

Studies are being conducted by Charles A. Reynolds, head of ENG-4, maintenance and minor

L. Philip Reinig (at UHTREX installation) was an engineering manager at Richland, Wash., before joining LASL.

construction, to further improve systems for maintenance effectiveness. It is planned to add industrial engineering talents to this operation in the near future.

Systems engineering teams, such as those currently assisting with the designs for the Los Alamos Meson Physics Facility (LAMPF), Fast Reactor Core Test Facility (FRCTF), and Ultra High Temperature Reactor Experiment (UHTREX), are capable of designing components and systems unique to current scientific experimental facilities. "This cadre of engineers is on a steep learning curve because they are working in the fringes of new scientific development," Reinig explained. He added that this is beneficial to the development of the engineers individually and tends to increase the effectiveness of such groups for later assignments.

The former computer facilities on the second floor of the Administration Building, which have moved to the new computer building, have been renovated to accommodate expansion of systems engineering activities and to provide for close grouping of construction planning functions with project engineering.

In face of rising costs, consideration is being given to provide more technical assistance to day-to-day operating and maintenance problems.

Reinig recognizes that utility systems within the Laboratory are already feeling the squeeze from overloading, and buildings and parking areas are being pinched for space. Studies have been started for the development of a long-range master plan for lands, buildings, and utilities which will help head

off any further squeeze in these areas. It is already evident that substantial upgrading of the power distribution system will be required during the next three or four years, he said.

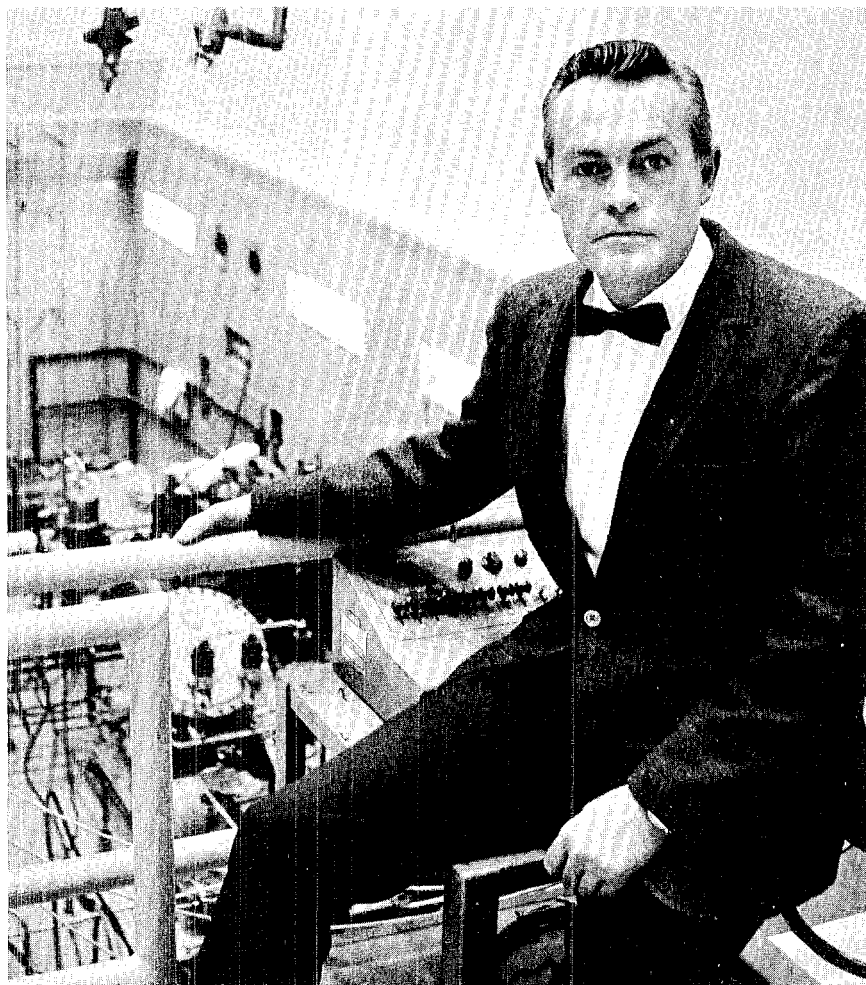
As an aid toward optimization of ENG capabilities, an automatic data processing scheme is being developed under the direction of Paul McConnell for planning and controlling each program. This new scheme will be launched in February.

The new chief of the Engineering Department was born in San Francisco on January 6, 1925. Several months later he moved with his parents to a ranch near Helena, Montana, where he became an avid fisherman and hunter. He attended Carroll College, Helena, and received his BS degree in electrical

engineering—after a three year hitch in the U.S. Army—from Gonzaga University, Spokane, Washington, in 1951.

Following his graduation, he was employed by General Electric Co., first as an engineer, then supervisor, and finally as an engineering manager at GE's Richland, Washington, operations. Reinig is married and has six children. He is a senior member of the IEEE, and a Registered Professional Engineer in the states of Washington and New Mexico.

Reinig, who taught reactor engineering and electrical engineering extension courses while with General Electric, is encouraging the LASL Engineering staff to write papers, present papers at technical meetings, and to apply for patents.



COCHITI DAM GOOD THING FOR COCHITIS



Huge Rio Grande River Project Starts;

Permanent Recreation Pool Will

Bring Water Sports Close, But

Don't Plan Excursion from Otowi

Construction of the \$50 million Cochiti Dam on the Rio Grande gets under way this spring.

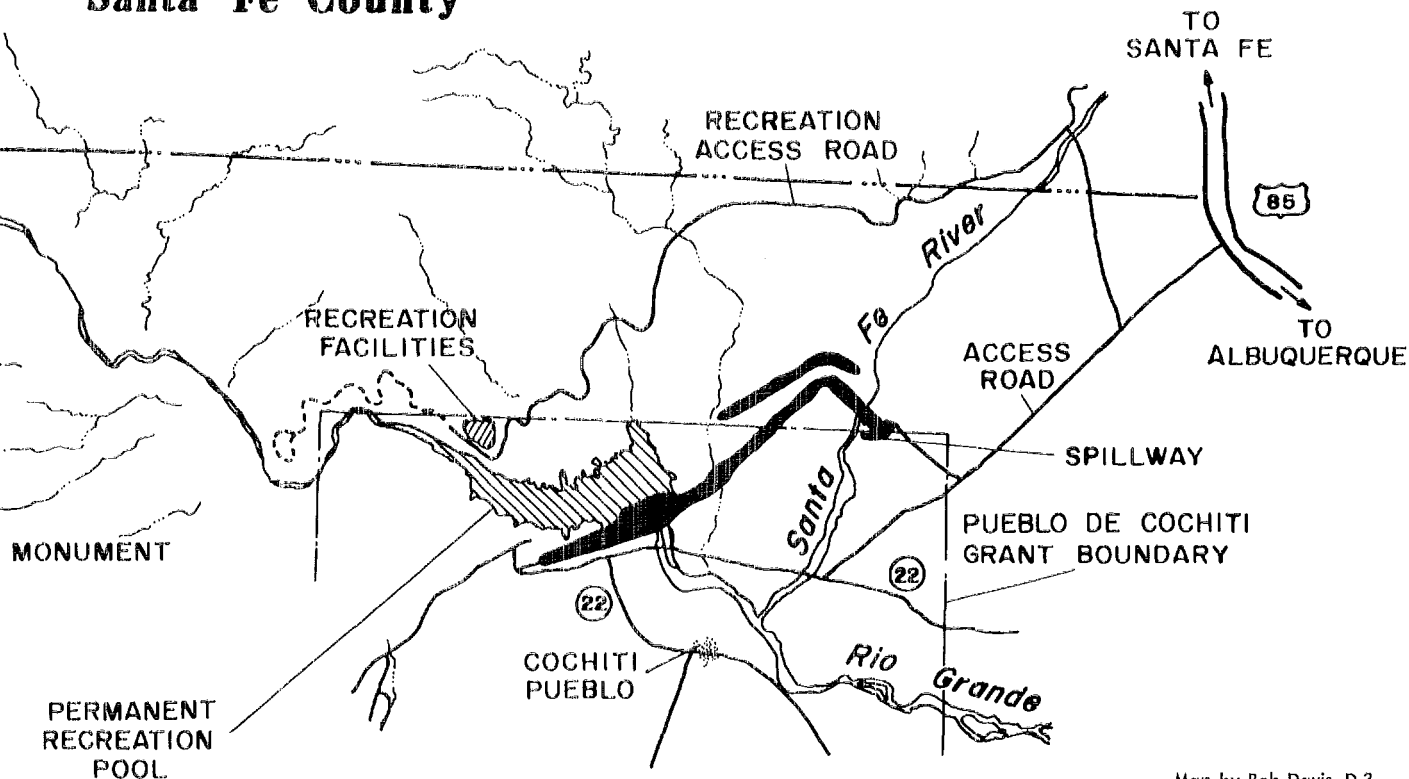
While the dam will bring year-round water sports closer to Los Alamos than ever before, only once in a long time is there likely to be water impounded far enough upstream to be seen from the White Rock rim.

Officials of the Army's Corps of Engineers said the permanent recreation pool at Cochiti, made possible by a water donation from the city of Albuquerque, will be about 5½ miles wide and about ¾ of a mile long, containing about 1200 surface acres.

SCALE IN MILES



Santa Fe County



Map by Bob Davis, D-3.

Map shows location of \$50 million Cochiti Dam on Rio Grande and Santa Fe Rivers. Only rarely will water stor-

age back up White Rock Canyon but 1200-acre permanent storage will provide water sports opportunities.

"The "width" of the pool will be the length of the huge earth-filled dam, twelfth largest in the world, extending all the way across the Rio Grande flood plain to include the mouth of the Santa Fe River. The "length" of the pool will be its extension from the dam upriver into the mouth of White Rock Canyon, normally less than a mile.

Only at periods of extreme flood water—like once in 50 years or so—is water expected to be backed up the full length of the 9000-acre reservoir, all the way to Otowi Bridge, and then only long enough to alleviate downstream flood dan-

ger. That flood is apt to be the same one that will overflow the 300-foot spillway at Abiquiu Dam on the Chama, which is similarly designed for the ultimate.

A \$2.2 million contract was awarded last month for the first major construction on the project—a spillway to carry the maximum flow the engineers calculate the Rio Grande can produce. Work on the main dam embankment is scheduled to start later this year, and is estimated to take nearly five years to complete.

The new dam will be about 40 miles by road from Los Alamos

over the Jemez Mountains via Highway 4, State Route 2 and Bland Canyon, or 70 miles by highway around through Santa Fe, La Bajada and Pena Blanca.

There won't be boats on Lake Cochiti for quite a while, but to the inhabitants of little Cochiti pueblo, in whose front yard the dam will be situated, life already has changed and will never again be as it was. The nearby Spanish-American village of Pena Blanca and pueblo of Santo Domingo also will feel the effects.

continued on next page



Cochiti. . .

continued from preceding page

The Cochitis, numbering less than 1000, have been out of the mainstream of New Mexico progress and have benefited little from the tourist traffic which has brought a level of prosperity to the Navajos and Apaches, for example, on their recreation lakes and in their forest campgrounds and other highway attractions.

Now things are going to be different for the Cochiti, too. The Cochitis are not going to wait for progress to hit the pueblo; they are going out to meet it. Their Tribal Council has granted an easement for the dam site to the Corps of Engineers in return for two substantial considerations: first, a payment of \$145,000 which will be used to build a new school; second, all rights to the returns from recreational development on 304 acres of land on both sides of the lake. In years to come, that is likely to be a lucrative source of revenue.

In anticipation of the completion of the dam in 1970, some develop-

ment work will start this year and more projects will follow over the next five years. These include a marina with launching facilities for 100 boats, a store, motel and restaurant, service station and riding stable, all to be commercially operated under lease from the Cochitis. Public facilities will include access roads, utilities, launching and parking ramps, picnic and camping areas. Eventually it is expected that cabin sites will be developed.

In addition to the Pueblo development, the Forest Service has plans for some public facilities east of the lake on Caja del Rio grant.

The Cochitis, who have lived in their rather isolated river-side pueblo southwest of Santa Fe for 600 years, are looking to the project with mixed emotions. The changes are not likely to be as sweeping as those produced in the late Sixteenth Century by the Spanish conquistadores who found the Rio Grande Pueblo Indians living in a late Stone Age state of development—without metal, wheels, or a written language. But the changes

Indians of centuries-old Cochiti Pueblo perform traditional dances on day compact with Engineers was signed. Dam will bring changes to the pueblo.

will be substantial, and probably beneficial for a change. This time it is the Indians who will reap the material rewards, at the price of losing some of their old ways.

Cochiti Governor Fred Cordero, speaking at a dedication ceremony in December at which the granting of easements was celebrated, epitomized the feelings of the pueblo:

"We were nourished and sustained by this great river for many hundreds of years before the white men came. Now it will provide new benefits. . . . We have always felt that this is our river, but we are willing to share it with others.

Signing of easement agreement assured construction of dam, gave prime recreation concession rights to Cochiti and \$145 thousand for a new school.

"The river will play a new part in our lives now. We will feel a little sad, even though we will gain much."

Almost wiped out by war and pestilence before the American occupation of New Mexico in the middle of the last century, the Cochitis are on their way back. From a population low of probably less than 200, they have grown to between 800 and 1000, and have adopted many modern ways, including medicine, schooling, electric power, piped water, agricultural machines and other innovations. Many of the young men of the pueblo are famous as members of the U. S. Forest Service's valiant Red Hat crew of smoke jumpers—tough and experienced fire fighters who are parachuted into major forest conflagrations beyond the reach of roads and trails. Others are employed in national parks and forests in the region, and quite a few expect to find employment on the new dam.

The water which is being donated by Albuquerque for the permanent pool is scheduled to come from the San Juan-Chama diversion, an enormous project now under way to bring water from the upper San Juan River through the Continental Divide above the town of Chama. Three big tunnels will empty in El Vado Reservoir and the Chama River by a series of dams and canals. First flow is expected in 1970, at the same time as the scheduled completion date of Cochiti Dam.



IT'S UP

Voters Will Decide on February 8 if Charter Will Be Used in Los Alamos; Board

Adoption of the charter is urged by the Bipartisan Committee for the Charter. Sara Balcomb and Lawrence Whinery are co-chairmen. They have prepared this article in favor of the charter.

The main purpose of the proposed charter is to give Los Alamos County a form of government that will be able to cope with the multitude of services that it will have to perform. We have no choice in the matter; the Atomic Energy Commission has been directed by the Congress to turn over to the local government all the municipal functions it now performs and which it has performed here for nearly 20 years.

Some of these services have recently been turned over to the County, and adjustments have been made to the traditional County government to handle the responsibilities. But these adjustments resemble patches on an inner tube and are not likely to be sufficient to take care of the increased pressures that will result from the additional responsibilities coming our way within the next 20 months.

The Charter Commission, which was appointed March 15, 1965, by the Board of County Commissioners as authorized by "Amendment Four" (Article X, Section 5 of the Constitution of New Mexico) has spent some nine months and more than 300 hours in hammering out a document that would create the framework around which the governmental organization will be built. The voters of the County will be asked to approve or

reject the proposed charter on Tuesday, February 8.

Some of the important features of the form of government that would be created by the charter are:

—A council-manager form of government, the same form of government selected by about one-half of the cities of comparable size in the United States.

—A council of five members, a majority of whom are elected every two years. This is the size of council which is both the median and the mode for cities from 5,000 to 50,000 in population and represents an increase of two from the present Board of County Commissioners.

—An administrator (the "manager" of the council-manager form of government) who hires department heads with the approval of the council, and who discharges them.

—A requirement that there be a personnel ordinance providing for a "merit system" and charter restrictions on the partisan-political activities of county employees.

—An independent board of equalization to check the assessments and hear appeals of taxpayers.

continued on page 28

YES

TO YOU

Charter for Council-Manager Government

Both Sides Present Their Arguments

NO

The following was prepared by Louis Burkhardt for Citizens for Representative Government, the group opposing charter adoption. J. Carlton Hoogterp and Clayton E. Olsen are co-chairmen.

Non-politics, too, makes strange bedfellows, judging from a typical bull session of Citizens for Representative Government, a bipartisan organization to oppose the charter.

There you'll find a mixed lot indeed, cutting across party and employment lines. Conservative Republicans, liberal Democrats and political moderates share committee assignments. A study group to analyze and compare charters from throughout the United States has attracted such diverse researchers as an Atomic Energy Commission security inspector, a housewife, a LASL physicist, and a Zia Company electrician. Few know or care whether the occasional businessman or elected official who drops by is a member—the idea is to obtain factual charter information from all sources.

What keeps the organization from coming unglued is its intensity of purpose—to get the people to read the charter.

Keeping a light rein on this spirited group are the co-chairmen, both LASL employees. J. Carlton Hoogterp, staff member in the critical assemblies group and former treasurer and long-time member of the Democratic Central Committee, shares the leadership with solid state physicist

Clayton E. Olsen. Republican Olsen was placed on the ballot at the last minute in the November, 1964, election and lost the race for state senator from Los Alamos.

The citizens' pitch, whenever speaking at neighborhood coffees and public meetings, is to back up each charter criticism by citing chapter and verse from the document itself. The point is explained by Thomas M. Sprague, LASL engineer and publicity chairman for the new-charter group. "Our purpose in giving article, section and page of the charter whenever we can is to interest people in looking up the words themselves. We feel that, once people have really read the charter, they will vote wisely on February 8."

Hoogterp and Olsen have found, somewhat to their surprise, that there is a hard core of objection to only a few sections of the charter. These are considered crucial. According to Hoogterp:

"No document is perfect. Most people in our group have said they can 'live with' minor imperfections. However, there are a few telling sections which appear to violate our hard-won constitutional rights. We are agreed that, if the charter is defeated and another outline for government drawn up, these sections will need work."

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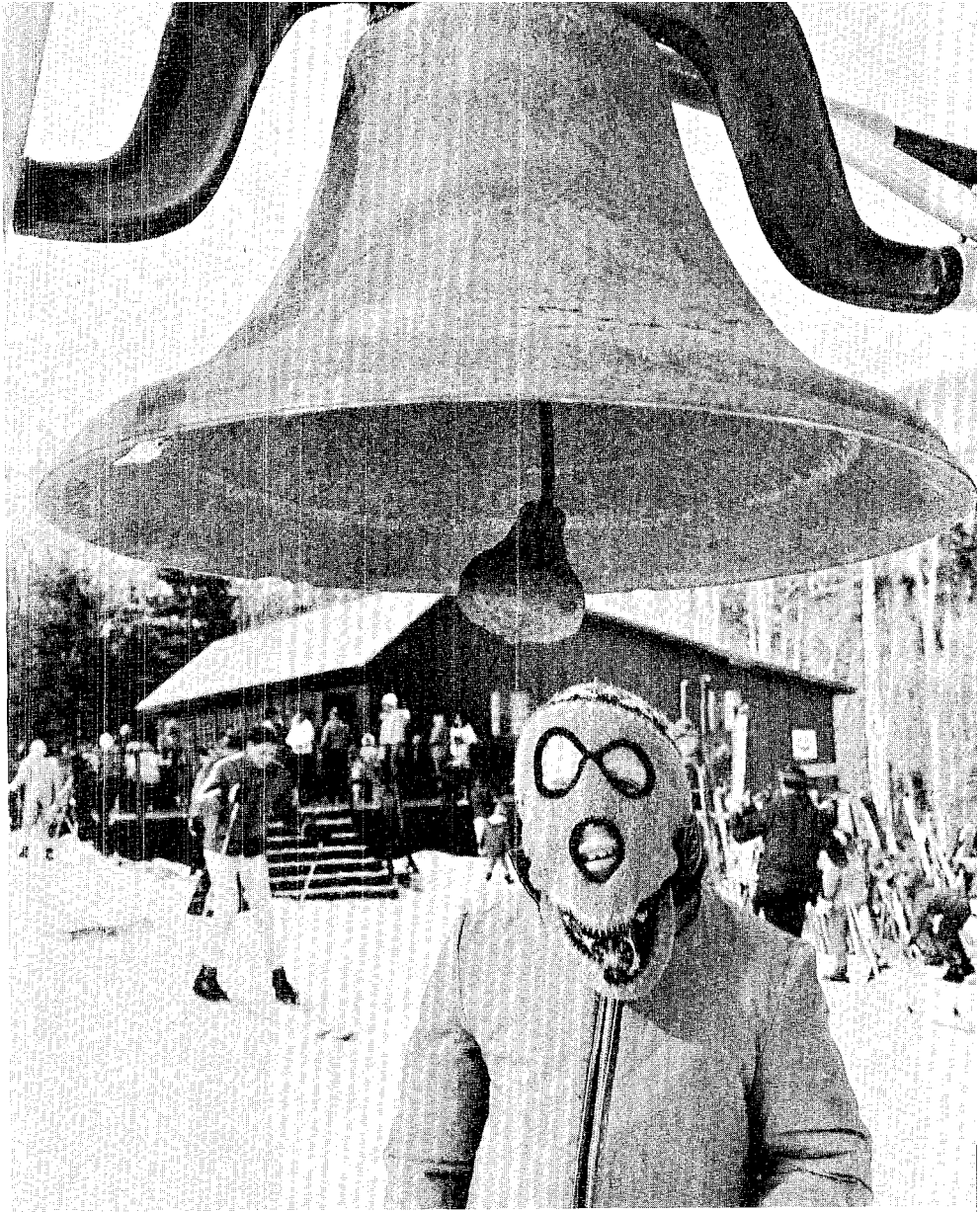


Pajarito Mountain's version of the Pied Piper of folklore, Skimeister Tony Perry, assembles his flock of "tiny tots" for beginning ski lessons. Tykes such as these, with their low center of gravity and high flex muscles and joints,

are the envy of many of their older classmates. More than 300 persons have enrolled in the ski school this year, including approximately 30 "tiny tots." A more advanced group, the "tiny tigers," has about 25 young students.

Pajarito Peewees

Photo-story by Bill Regan



Small edition of the abominable snowman answers the ski school bell.

With a Snow-covered Mountain in Their Backyard, It's No Wonder Los Alamos Residents Make Skiing a Family Affair. This Winter's Abundant Snowfall Has Kept the Pajarito Mountain Slopes Crowded Each Weekend and Ski Classes Are Jammed With Aspiring Schussers from 4 to 4³⁰

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Pajarito piggy-back a go go.



Helping hands for a beginner.



Last one down's a monkey's uncle!





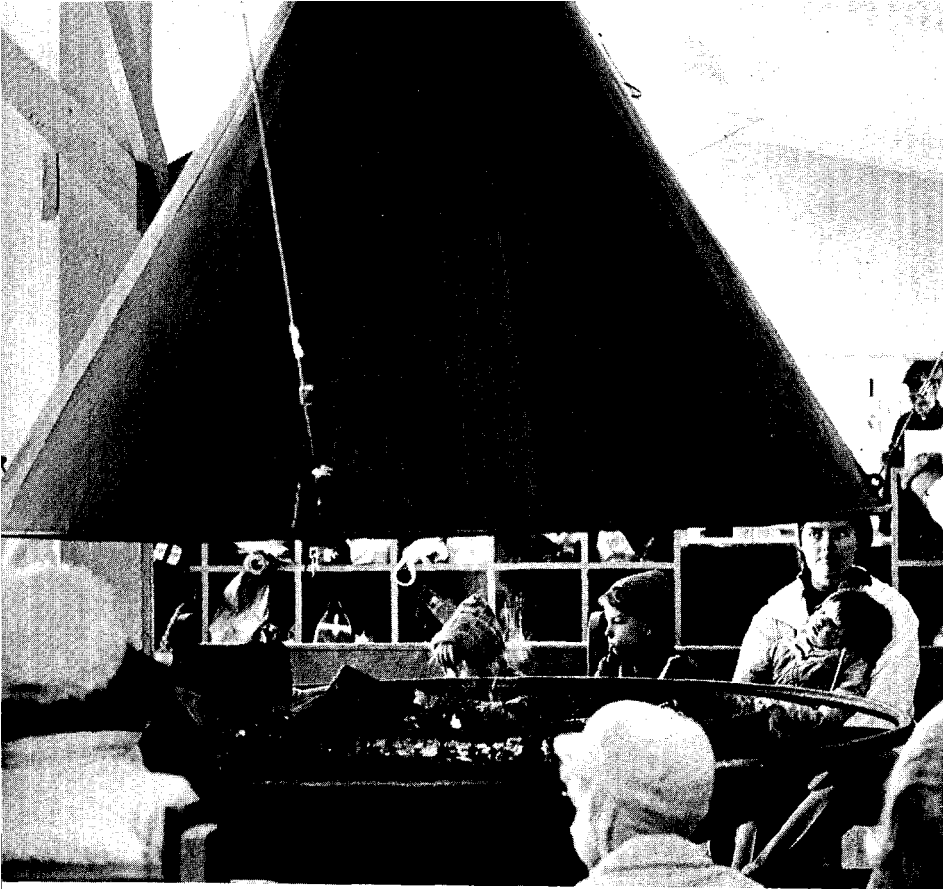
First time on the slats.



Snack time in the snow.

Ski school shapeup.





Warming up for another run.



A man can never be too careful.

The cleanup detail.



Ready for a rumble seat ride.



Charting Cosmic Rays

*'Flying Lab' Will Carry Laboratory
Team on Mission to Study Effects
of the Earth's Magnetic Field
on Radiations from Space*

By DUDLEY LYNCH

The Laboratory's big NC-135 jet exists primarily for weapons test diagnostics in the event nuclear atmospheric detonations are ever resumed. But, when taken for what it actually is—an intricately instrumented flying laboratory—the aircraft becomes highly useful for such objectives as viewing solar eclipses, photographing comets or, as will be the case this month, carrying scientists far aloft to study extraterrestrial particles that bombard the earth.

In this latter instance, 12 LASL scientists and support personnel plan to use the aircraft to participate in a unique charting of cosmic ray activities along a 7,000-mile route approximating the Western Atlantic's 60th meridian. The 12-day mission begins February 9.

The LASL aircraft will cover the southern leg of the project. At the same time, a NC-135 "flying lab" assigned to Sandia Corporation, Al-

continued on next page

Special data recording system is being developed by J-8 for use on cosmic ray mission. Working on the components are (top to bottom) Bernard N. Gauthier, Phil Porter and Dwight Stephenson, all J-8, and Joseph McCordle, EG&G electronics specialist.

Cosmic Rays . . .

continued from preceding page

buquerque, will be speeding over the northern segment. The resulting simultaneous aircraft detection and recording of cosmic rays at similar altitudes and dual hemisphere positions will provide a rare opportunity for the study of these solar and galactic radiations.

Inadequate airport facilities will prevent the LASL experimenters from going beyond Cape Horn, about 3,500 miles south of the magnetic equator, which is the general starting point for the divergent flights.

The two planes are scheduled to rendezvous February 9, following flights from Albuquerque via Miami, on the island of Trinidad off the coast of Venezuela. On the 11th, the twin craft will fly together to the magnetic (or cosmic ray) equator about 1,200 miles south of Trinidad. From the equator, the Sandia plane will retrace its path along the magnetic meridian followed from Trinidad and the LASL researchers will continue south to Buenos Aires taking readings along the same meridian.

Selection of the region along the 60th meridian for the research flights was made for several reasons. The 7,000-mile route has airports along its length that can accommodate the large jets. The route was desirable, too, because the South Atlantic Anomaly, a perturbation in the earth's magnetic field, was within reach of the southern flight.



The skewed characteristic of cosmic ray penetrations was the guiding factor in deciding to make simultaneous flights in both hemispheres. At the cosmic ray equator, the incidence of primary cosmic rays is at a minimum because of the effects of the earth's magnetic field. The incidence is highest at the earth's magnetic poles. Theoretically, then, as one travels toward the magnetic poles from the equator, the incidence of cosmic radiations in each direction should increase proportionally to the distance. But it does not, because of disturbances in the magnetic field and other factors. It is measurement of this imbalance that will be one of the objectives on the dual flights.

A day-long sweep over the ocean is planned by the Los Alamos researchers on the 13th for studies of

the South Atlantic Anomaly. Simultaneously, the Sandia contingent will be flying a similar pattern in the Northern Hemisphere gathering comparative data. The port-of-call that evening for the LASL NC-135 will be Rio de Janeiro; the Sandia plane returns to Trinidad.

Four days later, after a return to Buenos Aires, again flying a route through the Anomaly, LASL is scheduled to make the long probe to the tip of South America. Both departure and landing will occur at the Argentine capital. The Sandia crew, meanwhile, will leave Trinidad for Pease Air Force Base, New Hampshire, on the corresponding northern flight.

On the homeward journey, LASL is due in Trinidad on the 19th and in Albuquerque on the 21st.

Los Alamos personnel expected to make the trip include William E. Ogle, J-16 Division Leader; Neel Glass, J-16 Group Leader; Robert W. Peterson, J-16 Associate Group Leader; Richard L. Wakefield, L. Dick Tatro, Lee B. Sprouse and Lucian M. Black, all of J-16; Johnnie E. Gallegos and Edward J. Benavides, both of J-10; Dwight L. Stephenson, Assistant Group Leader of J-8; W. P. Wolff of J-8 and Buford C. Lyon of J-3.

Personnel from Edgerton, Germeshausen and Grier, Inc., Sandia Corporation, Douglas Aircraft Company and General Dynamics also are expected to make the flight on the LASL plane. The Lawrence Radiation Laboratory will provide a charged particle experiment but will have no one aboard.

Flying at altitudes between 27,000 and 35,000 feet, the experimenters will be charting the presence of neutrons, charged particles

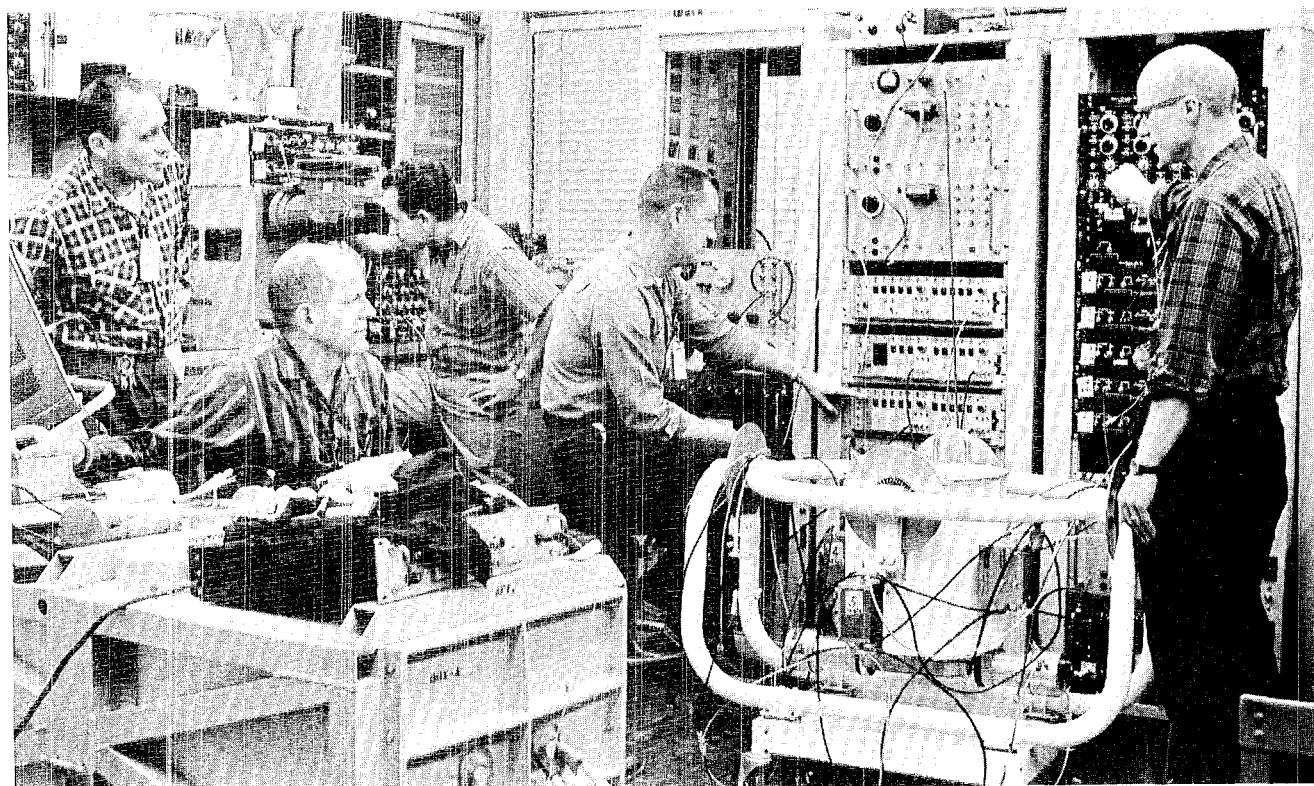
and high and low energy gamma rays, which are forms of electromagnetic radiation with frequencies above those of X-rays. This complex mixture of radiations results from collisions of primary cosmic rays with atomic nuclei in the earth's atmosphere at levels of 10 to 20 miles. As a result of this interaction, few primary cosmic rays as such ever reach the surface of the earth or are measured at the altitude at which the LASL plane will be flying. By studying the characteristics of these secondary radiations, however, scientists are able to deduce much about the primary cosmic rays.

"One of the things that makes our experiment worthwhile," says Glass, "is that we have two planes capable of making simultaneous measurements at conjugate (coupled) points in each hemisphere."

LASL's involvement, Glass says, stems from general scientific moti-

vation and "the fact that we do have the airplane and the ability to make these measurements." Laboratory scientists made a similar study last summer when cosmic ray experiments were carried out along a meridian running from near the magnetic South Pole to the Pacific island of Guam. The flight followed the May 30th solar eclipse and was a part of that LASL expedition.

One change in instrumentation in the February flight will be a special data-recording system which has been under development by J-8 since October. The system is intended to bypass the laborious hand-reducing of experimental data by recording the readings of all detectors and counters simultaneously on magnetic tape in such fashion that they will be "computer compatible" without further processing.



Five of 12 LASL personnel planning the cosmic ray flight monitor detection equipment to be mounted in the NC-

135. They are (left to right) Dick Tatro, Neel Glass, Lucian Black, Richard Wakefield and Robert Peterson, all of J-16.

Ten are Named

AIC Fellows



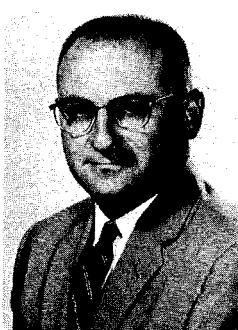
FOWLER

LASL since 1952; PhD and MS from University of Michigan, BS from University of California.



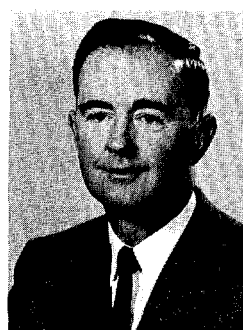
KEENAN

LASL since 1951; PhD and MS from University of New Mexico, BS from South Dakota School of Mines.



KELLER

LASL since 1950; PhD and MA from Harvard University, BA from Harvard College.



LEARY

LASL since 1946; PhD from University of New Mexico, BS from Newark College of Engineering.



MULFORD

LASL since 1950; PhD from Brown University, BS from Hofstra College.

Ten Laboratory chemists have been elected Fellows of the American Institute of Chemists.

The professional society confers Fellowships on "chemists or chemical engineers who have achieved full maturity in the professions as evidenced by record of outstanding scientific accomplishments or by having attained positions of distinction or responsibility."

LASL staff members honored are:

- Dr. Robert D. Fowler, CMF Division Leader.
- Dr. Thomas K. Keenan, CMF-4.
- Dr. William E. Keller, CMF-9.
- Dr. Joseph A. Leary, CMB-11 Alternate Group Leader.
- Dr. Robert N. R. Mulford, CMF-5.
- Dr. Clayton E. Olsen, CMF-13.
- Dr. Sherman W. Rabideau, CMF-2.
- Dr. Leslie M. Redman, D-6 Group Leader.
- Dr. Louis C. Smith, GMX-2 Group Leader.
- Dr. Glenn R. Waterbury, CMB-1 Assistant Group Leader.

There were only two other AIC Fellows at Los Alamos before the new awards last month--Dr. Robert B. Gibney of CMF-13, and Dr. Charles P. Kempter of N-1. The late Dr. Herbert Ungnade

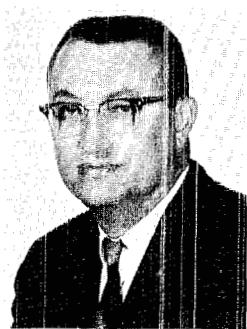
of GMX-2 was also a Fellow. Kempter is a member of the organization's National Membership Committee.

AIC was founded in 1923, devoted to elevating the professional status of chemists and chemical engineers. An AIC committee in 1941 first proposed the establishment of the National Science Foundation and AIC was an active supporter of the bill that created the Foundation in 1946.

In addition to the Fellow citations, the AIC annually confers a Gold Medal award for "noteworthy and outstanding service to the science of chemistry of chemical engineering or the profession of chemist or chemical engineer in the U.S."

An "Honorary" AIC membership can also be granted for distinctive achievement in the chemical field. Atomic Energy Commission Chairman Glenn T. Seaborg, who has held professional AIC membership since 1949, received an Honorary Membership in 1962.

Other activities of the organization include awards to outstanding senior college students and "Honor Scrolls" to individuals for outstanding contributions to the profession or science. Both are conferred by local AIC chapters.



OLSEN

LASL since 1955; PhD from Ohio State University, BS from Trinity College.



RABIDEAU

LASL since 1949; PhD and MS from State University of Iowa, BS from University of Minnesota.



REDMAN

LASL since 1949; PhD from Massachusetts Institute of Technology, BA from Amherst College.



SMITH

LASL since 1949; PhD from Columbia University, BS from the University of Rochester.



WATERBURY

LASL 1946-1948 and since 1952; PhD from Iowa State College, BS from Colorado A&M.

The Technical Side

American Physical Society Meeting, New York City, January 26-29.

"Studies of Nuclear Structure with Neutron Capture Gamma Rays" by H. T. Motz, P-DO. (INVITED PAPER)

"Estimate of Spin-Orbit Effects of F^{19} (d, p, gamma) F^{20} Directional Correlation Measurements" by Ross W. Newsome, Jr., P-12.

"A Study of the Mass 4 System by the He^3 (d,p), H^3 (d,p), and H^2 (t,p) Reactions" by Gerald H. Ohlsen, Ross Newsome, Jr., and Richard H. Stokes, all P-12.

"Fluctuations in the $^{31}P(\alpha, p)^{34}P$ Cross Sections" by Gregory G. Seaman and Robert B. Leachman, both P-12.

"Elastic Scattering of Tritons from $Cr^{52}Ni^{62}$ " by Allen G. Blair, P-12; Joseph C. Hafele, P-DO; and Dale D. Armstrong, P-12.

"Study of the $Ca^{40} 48(t, p)^{42} 50$ Reactions" by David C. Williams, J. D. Knight, both J-11, and W. T. Leland, P-10.

"Dynamics of Disordered Harmonic Lattices in One, Two and Three Dimensions" by Daniel N. Payton, III (University of Missouri) and William M. Visscher, T-9.

"Fourth Order Corrections to the Rotational Spectra of Even-Even Rare Earth Nuclei" by James J. Griffin and Marvin Rich, both T-9.

"Calculation and Interpretation of the Pressure Dependence of the NMR Chemical Shift and the Mossbauer Isomeric Shift in the Alkali

Halide Lattices" by D. W. Hafelemeister, P-2 and W. H. Flygare (University of Illinois).

"Gamma-Ray Measurements from $La^{139}(n, n\text{-prime gamma})$ Using a $Ce(Li)$ Detector" by Raymond M. Wilenzick (Visiting Staff Member from Tulane University) and John M. Palms, P-DOR.

"Studies of Fission from $PU^{240}(t, pf)$ and $Pu^{239}(t, pf)$ Reactions" by Harold C. Britt, P-DOR; Ross W. Newsome, Jr., and Richard H. Stokes, both P-12.

"Coulomb Excitations of Yb^{171} and Yb^{173} " by John M. Palms, P-DOR, Gregory C. Seaman, P-12, and Eugene M. Bernstein, P-DOR.

"Observation of Doublet Splitting of the 2.6-MeV Octupole State of Pb^{207} " by Joseph C. Hafele, P-DO and Allen G. Blair, P-12.

"Large Angle Neutron-Proton Correlation Function at 23 MeV" by James J. Malanify, P-DOR; Philip J. Bendt, Thomas R. Roberts, both CMF-9; and James E. Simmons, P-DOR.

"A Study of the Mass 4 System by the $H^3(t, d)$ and $He^3(t, d)$ Reactions" by Richard H. Stokes, P-12, Nelson Jarmie, P-DOR, Ross W. Newsome, Jr., P-12, and Gerald G. Ohlsen, P-12.

"Linear-Accelerator Meson Factory: General Features and Research Possibilities" by Louis Rosen, MP-DO. (INVITED PAPER)

Presentation at Seminars: The Rand Corp., Santa Monica, Calif., Dec. 8, 1965; IBM Research Div., San Jose, Calif., Dec. 9, 1965:

"Numerical Solutions of the Benard Problem" by Jacob E. Fromm, T-3.

Tenth AEC Coated-Particle Fuels Working Group Meeting, Columbus, Ohio, Dec. 7-8, 1965 (CLASSIFIED MEETING):

"Development of Particles Coated With Pyrolytic Carbon" by R. J. Bard, CMB-8.

NASA Solar Eclipse Symposium, Moffett Field, Calif., Dec. 16-17, 1965:

"The Los Alamos Scientific Laboratory Solar Eclipse Expedition" by A. N. Cox, J-15 and D. H. Liebenberg, CMF-9.

Seminar at University of Southern California, School of Medicine, Los Angeles, Calif., Jan. 4:

"Gratuitous Formation of Polyuridylylate and Polyadenylylate Catalyzed by RNA Polymerase" by D. A. Smith, H-4.

Presentation at Colloquia Talks at University of Illinois, Jan. 6, and at Argonne National Laboratory, Jan. 7:

"Some Reactions Induced by He^3 Particles, He^4 Particles, and Tritons in the Medium-Mass Region" by A. G. Blair, P-12.

AEC Contractor and Health Protection Meeting, Chicago, Ill., Jan. 11-14:

"Experiences at Los Alamos in Testing and Use of Health Survey Instruments" by Dean D. Meyer, H-1.

Special Libraries Association Meeting, Rio Grande Chapter, Albuquerque, N.M., Jan. 21:

"Harnessing the Atomic Nucleus" by Louis Rosen, MP-DO (INVITED PAPER)

Second Annual Mossbauer Symposium, New York City, Jan. 25:

"Localized Moments of Dilute Fe in Non-Magnetic Host Metals" by R. Dean Taylor, CMF-9.

WHAT'S DOING

ICE SKATING: Los Alamos Canyon rink, weather permitting. Children under 12, 15 cents; other students, 25 cents; adults 50 cents. Season tickets: Children \$3; adults \$5.

Mondays: General skating 3 to 5 p.m. and 7 to 9:30 p.m.

Tuesdays: Ladies Club 9:30 to 11:30 a.m.; general skating 3 to 5 p.m.; Figure Skating Club 6 to 7:30 p.m.; adults only 7:30 to 10 p.m.

Wednesdays: General skating 3 to 5 p.m. and 7 to 9:30 p.m.

Thursdays: Ladies Club 9:30 to 11:30 a.m.; general skating 3 to 5 p.m.; Figure Skating Club 6 to 7:30 p.m.; adults only 7:30 to 10 p.m.

Fridays: General skating 3 to 5 p.m. and 7 to 9:30 p.m.

Saturdays: General skating 2 to 4:30 and 7 to 9:30 p.m.

Sundays: General skating 2 to 4:30 p.m.; Figure Skating Club 6 to 7:30 p.m.; adults only 7:30 to 10 p.m.

FOLK DANCING: International Folk Dancers Club, Recreation Hall, Tuesdays 7:45 to 11 p.m. First half hour is devoted to instruction. Everyone welcome, 40 cents per person per night.

OUTDOOR ASSOCIATION: No charge, open to the public. Contact leader for information regarding specific hikes.

Saturday, February 5, Pipeline Road from Pajarito Ski Area—about 10 miles on snowshoes or skis with about 2000 feet altitude loss. Bob Skaggs, leader.

Saturday, February 12, Pajarito Mountain, via Camp May and saddle—about four miles and 1000 feet altitude gain, on skis or snowshoes. Terry Gibbs, leader.

Sunday, February 20, Caballo Mountain, snowshoe and ski trip with 2500 feet altitude gain and return—about six miles. Ken Ewing, leader.

Saturday, March 5, Lake Peak, snowshoes and skis with 2000 feet altitude gain—rope may be used.

FILM SOCIETY: Civic Auditorium. Admission by single ticket, 90 cents, or season ticket \$4. Tickets available at door.

Wednesday, February 16, 7 and 9 p.m.—"Mouse on the Moon," 1963 British comedy directed by Richard Lester and starring Margaret Rutherford, Terry-Thomas, and David Kossoff. A spoof on the international space race and a sequel to "The Mouse That Roared." 85 minutes.

ST. JOHN'S COLLEGE FILM SOCIETY, Great Hall, Student Center, Santa Fe. Films shown at 7:30 p.m. Single tickets \$1, series \$4, available at door.

Saturday, February 5—"A Raisin in the Sun," U.S., 1961, is the screen version of the award winning Broadway play which reveals the emotions and struggles of an urban Negro family. Sidney Poitier, Claudia McNeil and Ruby Dee in their original stage roles.

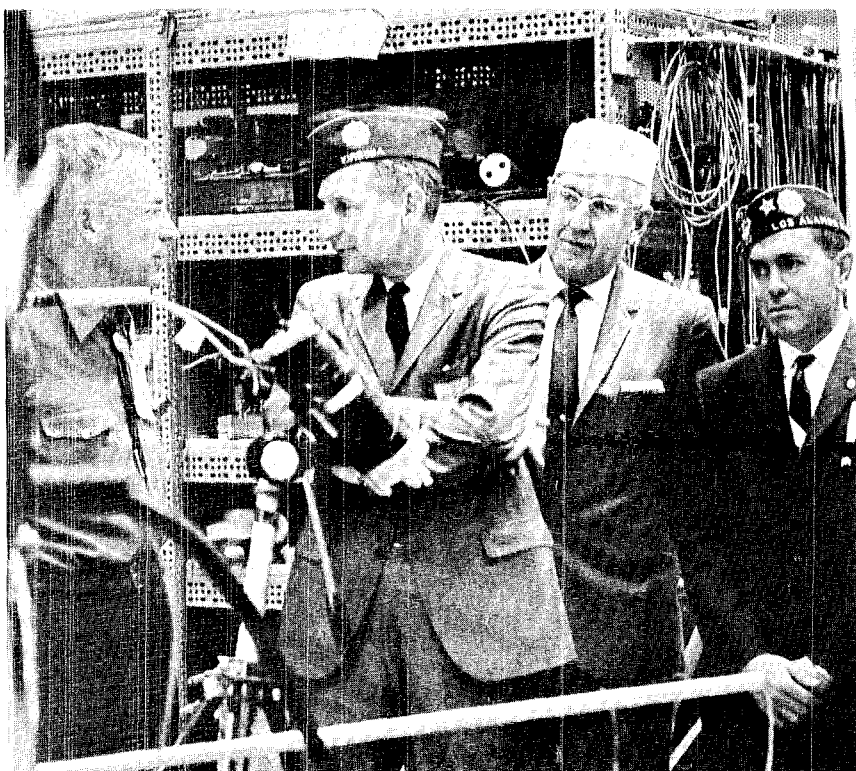
Saturday, February 12—"The Magnificent Seven," Japan, 1954, explores human relations that result when a Sixteenth Century Japanese village hires seven Samurai for protection from bandits.

Saturday, February 19—"Mr. Hulot's Holiday," France, 1952, centers around a seaside vacation turned from most ordinary to anything but that.

Saturday, February 26—"Ashes and Diamonds," Poland, 1960, portrays circumstances surrounding the assassination of a powerful political leader by a young resistance fighter and the divergent resulting consequences.

PUBLIC SWIMMING: Los Alamos High School Pool, Adults 35 cents, children 15 cents. Saturday and Sunday 1 to 6 p.m. Monday, Tuesday and Wednesday, 7:30 to 9:30 p.m.

Laboratory visitors last month included the National Commander of the American Legion, L. Eldon James, a Hampton, Va., attorney. In the photo, P-17 Group Leader John Marshall (left) explains controlled fusion research to (from left) James; Fred Roach of M&R, who is a New Mexico Legion Department Executive Committeeman; and Walter Ciddio of SD, commander of Los Alamos Post 90 of the Legion.



Charter--Yes . . .

continued from page 14

—A requirement that the County's books of account be on the accrual basis—the same way that the Laboratory's books and Zia's books are kept.

—Mandatory requirements for notice and hearing before the Council adopts the budget.

—A utilities department integrated for administrative purposes with other County departments but with a "watch dog" board to protect the people's interests.

—Partisan elections at the same time as the state and national elections.

—Provisions for independent candidates to run without party endorsement.

—Provisions for initiative, referendum and recall upon the presentation of petitions signed by designated percentages of registered voters.

—An elected County Judge, similar to the municipal judge or police magistrate of other New Mexico cities.

—Provision for amendment of the charter upon a vote of the people.

—The "short ballot," or the abolishment of the present offices which are now filled by election. These offices are those of the clerk, assessor, treasurer, sheriff, and surveyor.

The Charter Commission realizes that it may become necessary to amend the Charter and has provided three ways to bring about a public referendum for that purpose:

1) By a Council Ordinance;

2) By report of a Charter Commission created by Council or initiative ordinance;

3) By petition signed by 20% of the voters.

The Charter also provides for public initiative of ordinances and repeal of ordinance by referendum.

The required number of petitioners is less in each case than is required by the New Mexico Municipal Code (by as much as one-third less for amendment and 50% less if the amendment is proposed by initiative ordinance). The number of petitioners was chosen to allow issues of real public concern to be brought to a vote while protecting against too frequent, expensive, special elections on issues which have little public interest.

If the charter is approved on February 8, the first council and judge will be elected in November and the charter will be fully effective on January 1, 1967.

This charter received the unanimous approval of the 10 members of the Charter Commission, even though all of them were not completely happy with all the provisions. However, they all believe that the proposed charter will create a reasonable framework around which our Home Rule government can be built.

Charter--No . . .

continued from page 15

As Olsen puts it:

"The proposed charter is a powerful and untried instrument, unique in the state of New Mexico. It may well be unique in the nation for its concentration of power in the hands of a few. Of all the charters we have studied, it is the least responsive to change and to the will of the people."

Analyzing reaction to the February 8 election Hoogterp said: "We feel we are being pushed. About a month after we have seen the final draft of the government under which we may have to live for the rest of our lives, we must vote on it. The healthy discussion we are having now should have come before the final draft. But at that time, as the Charter Commission said publicly and repeatedly, it re-

fused to debate or justify the charter."

Hoogterp and Olsen summarized the following as the charter's most objectionable sections:

"Section 101, Powers of County. The charter states that in case of conflict with state law, the charter will prevail. We see this as a source of lawsuits and a loss of state legal protection. Others see some humor in it, cite our county's future role as 'the 51st state—the state of Los Alamos.'

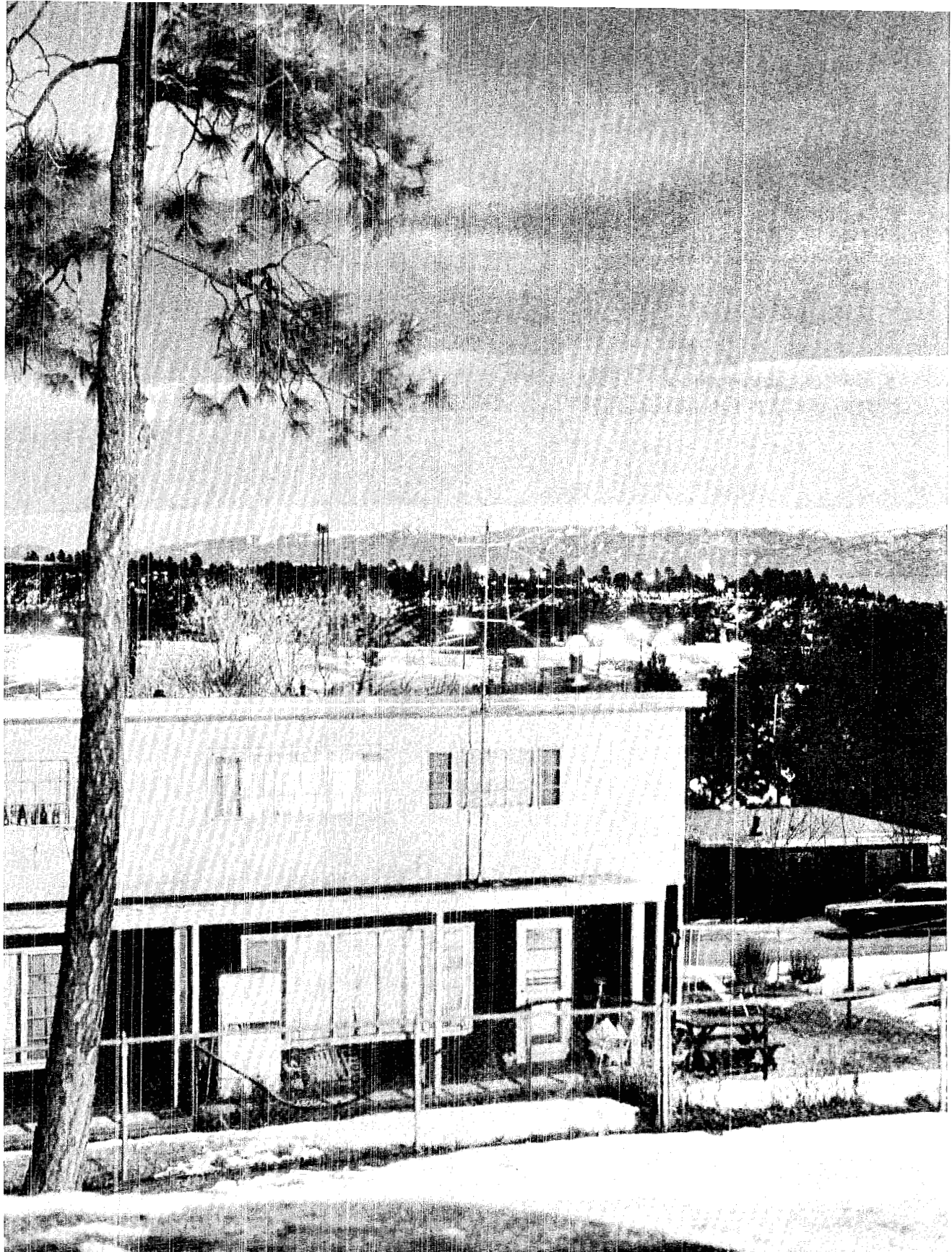
"Section 303, Powers and Duties of the County Administrator. You never will be able to justify to some of us the taking away of our right to elect our county clerk, treasurer, assessor, sheriff and surveyor. The charter provides that the county administrator will appoint these people.

"Article VI. Utilities. Our own county interim utilities board recommended a semi-independent

utilities board which would hire its own professional administrator. This advice was ignored. Under the charter, the utilities manager shall be appointed by the county administrator. The utilities board has essentially no administrative or decision-making powers. If, as often happens under such a setup, politicians do milk the utilities, we could not even get out from under—as have other communities—by selling the utilities. Section 604 forbids this.

"Section 1000, Charter Amendment. The charter will be extraordinarily difficult to amend. It is several times harder to amend this charter and its ordinances than is the case with other charters we have studied.

"A young, one-industry town, taking its first plunge into self-government should go slowly, and make it easy—not difficult—for the people themselves to change the laws they live under."



Although it looks like a twilight view of North Community and the snow-capped Sangre de Cristos, Bill Jack Rodgers made this photo shortly after midnight January 7, by the

light of the full moon. Exposure was 40 seconds on Tri-X film with a K-2 filter at f4. Development was in Acufine. Streaks in the sky record earth movement relative to stars.

Henry T. Motz
3187 Woodland
Los Alamos, New Mexico

87544

